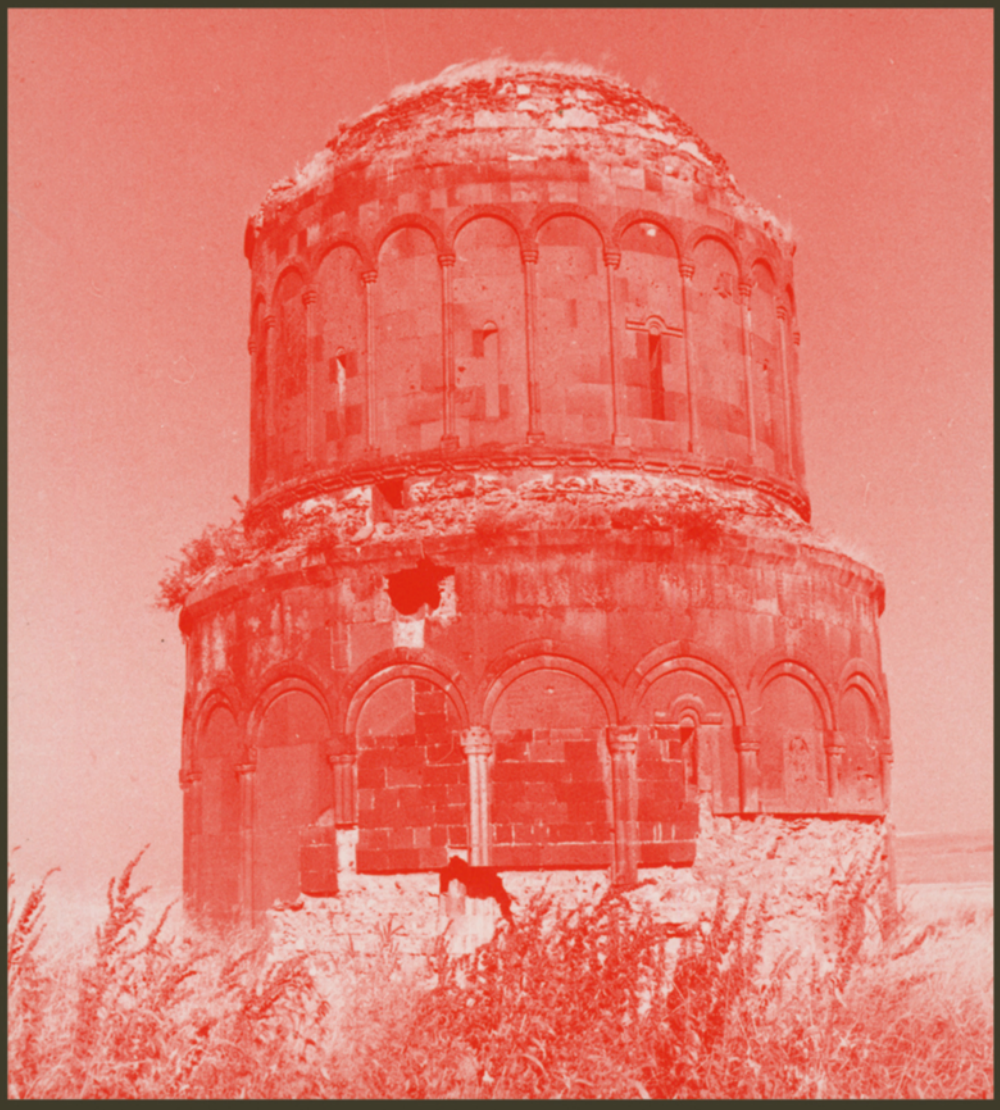
Eastern Turkey: an Architectural and Archaeological Survey

Vol. I

T.A. Sinclair



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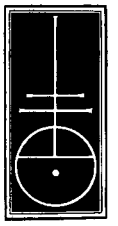

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PART I
INTRODUCTION

PREFACE

The rationale of this book is, not that eastern Turkey is the better or the worse half of Turkey, but that it is the half whose monuments need justice done to them. The book is not an attempt to draw attention away from the rest of Turkey. On the contrary, for reasons of economy it assumes that the reader is already familiar with certain aspects of the main lines of Turkey's history; others of these aspects are drawn out here because they have special relevance to the area.

The book examines the area's archaeological landscape. Originally I meant to write an account of the area's best buildings, concentrating on the Middle Ages. This would have been a guide-book. But an essential precondition of a guide-book was lacking: knowledge, both in a reasonably wide circle of people and in myself, of the archaeological landscape. To have carried out the original project would have been nearly as bad as describing the buildings of Rome without any knowledge of the archaeological landscape of the remainder of Italy. To gain a knowledge of the archaeological landscape a thorough review of the buildings and the archaeological sites seemed to me essential. It might be said that most visitors to a country do not need an awareness of the archaeological landscape to understand given buildings, nor do they actually have the awareness. But a vague general awareness is precisely what they do have, and it is also the reason why they go to the country in question in the first place. In the case of eastern Turkey it seemed to me so little information about the buildings and archaeological sites was available, except with enormous expenditure of time and trouble, that it was impossible that a vague general awareness could exist. If it did, it would be badly distorted. No doubt I shall write a guide-book, cutting this book down to perhaps one-eighth of its length, and if I do not it is certain that somebody else will. But a guide-book, at least a guide-book that is not ignorant and radically misleading, is only made possible by the present book. And this is not because the one is a large-scale version of the other, but because this book provides a reasonably accurate picture of the archaeological landscape.

An archaeological landscape does not include vanished buildings. It may be asked what place descriptions of archaeological sites which have been either submerged by a dam reservoir or else filled in and are therefore impossible to inspect could have in such an account. The answer is simple: since these sites have been the object of recent interest and investigation, they are in fact part of the archaeological landscape. Moreover in an area where such a high proportion of sites are excavated precisely because they are due

to be flooded, failing to give an account of these sites would leave the impression that little excavation was being done at all. And when it comes to historical geography, sites cannot be left out just because a dam has been built. One may want to say that knowledge simply of a site's position is the essential for historical geography, but knowledge of the physical remains is essential too: the physical remains are part of the historical evidence.

The reasons for including so much geographical information are parallel to the reasons for making a picture of the archaeological landscape in the first place. Consciousness of a building is firmly anchored in knowledge of the physical geography of its district. Some may want to say that it is perfectly possible to study buildings without studying local topography, but even if this is true the problem is not simpy the objective links between one and the other, but the mental framework into which information about buildings can be placed. Information can be picked up and remembered easily if the right framework is already there.

It is partly for the same reason that such a big proportion of this book is taken up by historical passages. The buildings could not be allowed to appear out of historical void. The historical passages will no doubt be of interest on their own, but the point of including them here is to provide a historical background for the presence of the buildings. Similarly none of the complexities of the history have been shirked. To my mind they are of great interest, and no doubt the reader will find them of great interest too. But even if he did not I would still not want to spare him the historical complexities. It is just those complexities which explain the buildings' positions, character and dates.

More than usual is said, both in general and in connection with particular buildings, about the buildings' present condition and their present treatment. As usual part of the purpose is to provide a general background which will make the buildings more familiar, or at least remove some of the obstacles to familiarity. But reading a cross-section of archaeological and art-historical literature has convinced me that whereas archaeologists and art-historians are perfectly capable of recording the good state of preservation or the state of degradation of individual buildings, they are unwilling to focus on the question in general. Yet answers to the general question are a valuable instrument for interpreting the past history of a building and its character when first built. It may be thought that discussing the general treatment of buildings in somebody else's country goes beyond the remit of the archaeologist or art-historian: it may look like an attempt to interfere. My object, however, is not to interfere, but to explain the situation. As the true situation is rather better in most respects than it is sometimes believed to be, I do not see that that there can be good grounds for objecting to a general discussion of the buildings' treatment. If read carefully the picture of people and their motives given here will appear sympathetic rather than hostile.

The present book is aimed both at the general reader and at the specialist, always remembering that the specialist in one field may be the general reader in another. However I believe that the general reader has to be carefully catered for, whereas the specialist should be more capable of looking after himself. I have concentrated, particularly in describing individual buildings, on extracting the most important points and placing them first. Specialists may dislike stars and daggers indicating the general interest of a building or place. I could argue the question of "value judgments" at length: suffice it to say that I regard these stars and daggers as a highly important feature. If the area were better known I might leave them out, but that the area is not well known is the occasion of the book.

The book's first debt is to the local people who have put myself and fellow-travellers up in their houses, escorted us to monuments, shown us the way or otherwise helped us. On the whole I have met an impressive hospitality and politeness, which in many ways puts the equivalent in this country to shame.

In the second place I am grateful to the friends who travelled with me in Turkey on various occasions. These have shown great patience in going with me to monuments and sites, and helping me to investigate them.

Thirdly, I have consulted experts in a great variety of academic fields, in many cases leaders in their professions in Europe, Turkey and the U.S.A. Many of their suggestions are incorporated in this book, though needless to say the responsibility for all details of the content is mine. Circumstances, partly lack of space, make it impossible to name them, but I hope to have an opportunity to do so in future.

However I must thank Jill Storer for typing the bulk of the Van chapter, and Toby Buchan for discussing the book with me at a critical stage.

T. A. SINCLAIR
LONDON, 1986

NAMES, SYMBOLS, ARRANGEMENT OF MONUMENTS, ETC.

1. Pronunciation and spelling of names

(i) Turkish.

Turkish names are given in the modern Turkish alphabet, which is an adaptation of the Roman alphabet. With a few exceptions, the Turkish alphabet is phonetic. Some Roman letters are not used, since there is no sound to represent. The letters adapted from the Roman alphabet or differing in sound from their Roman equivalents are these:

ç : ch in "church"
ş : sh in "sheet"
c : dg in "budge"
j : j as in French
ö: ö as in German
ü: ü as in German
ı (dotless i): -er as in "water" ("r" not sounded). Can be stressed. "i" is that of "bill".

ğ ("soft g"), in modern Turkish, an attempt to produce no sound at all. Differs according to vowels either side.

A. After o-, u-, ö or ü and followed by a second vowel generally a "w" sound.
B.1. After a- and ı-, and followed by a second vowel, more or less no sound is produced.
B.2. After e- and i- and followed by a second vowel, generally a consonantal "y" sound.
C. If followed by a consonant, its effect is to lengthen the preceding vowel; nevertheless after a- and i- there is an attempt to stop the breath ("Pağnik" is pronounced "Pā.nik") and after e- and i- the "y" sound is made.

The circumflex (^) indicates a long vowel, and after l and k palatalisation of that consonant also. Palatalisation more or less means the interposition of a "y" sound, which makes the k or l more liquid. In Turkish spelling, "Kâhta" is pronounced "Kyahta".

Regional pronunciation: note in particular

(a) "-ğ-" can retain its former standard sound of "gh". This is made at the back of the throat: roughly the "gh" of "agh" instead of "ch" of "ach". Very rarely can one hear the full "g".

(b) In the Pontic region, "d" and "t" often swap places, as do "p" and "b". E.g. "tere" for "dere" ("valley"). Further east, in the Artvin and Tortum districts, "k" sometimes becomes "tch".

A so-called qualifying relation between two nouns is indicated by the suffix -i or -si: the qualifi*ed* noun comes second, bearing the suffix. General example: "çay evi" (sometimes written as a single word), "tea-house". But the suffix is especially common in the names of places or monuments, because when the name involves the type of monument or place this is treated as the qualified noun:

Şeytan Kale-si:	Devil Castle (occasionally the suffix is dropped, e.g. Kız Kale, "Maiden Castle").
Meryemana Kilise-si:	Church of the Virgin, or Church of Our Lady (lit. "Mary-Mother Church" or "Church of Mary-Mother").

The suffix is -i or -si according as the noun in question ends in a consonant or vowel. The "i" of the suffix also varies according to the previous vowel, e.g. "köy" (village) – köyü: Narlı Köyü, "The village of Narlı". "Cami", "mosque", normally takes -i rather than -si, because a sound present in the original Arabic word is felt to be there, though not noticeable in speech and not represented in writing. "Hüsrev Paşa Camii", "Hüsrev Paşa Mosque" or "Mosque of Hüsrev Paşa". Some Turkish scholars write "Camisi", but this reflects a determination to be modern rather than the actual pronunciation; however "camisi" is sometimes heard.

Former names: I write Turkish names of long-dead people in the modern Turkish alphabet, provided that the name in question is genuinely Turkish: for example "Tuğrul". If the name is not Turkish but simply belongs to a Turk, I use Roman characters in their English pronunciation (see below). E.g. "Malik Shah", not "Melikşah", which is the spelling a modern Turkish scholar would adopt.

(ii) Arabic

Arabic was spoken in the region described by this book from the mid-7th century onwards. It is the language of many historical sources and building inscriptions. Some current place names are Turkicised forms of originally Arabic names.

There are some sounds in Arabic which can definitely not be indicated in Roman script with an English or other European pronunciation. In this book the Arabic pronunciation is put down in English spelling, so far as this will represent the sounds in question. Some sounds are misrepresented: they are approximated by other letters, which themselves adequately indicate valid sounds in Arabic. The alternative would be a strict transliteration using certain symbols invented for the purpose. There are some names which readers may have met, outside this book, only in transliteration. These have been put in the index, with a reference to the main entry (in the latter the name is spelt in the inexact representation normally used in this book). Since for a few letters different transliteration conventions are followed, I have sometimes put in the index *both* the forms implied by the respective conventions.

In the text, where the transcription simply approximates the pronunciation without special symbols, I concentrate on unambiguity: for example I put "dj" rather than "j", except where there could be no doubt that a "dj"should be made. The Arabic sounds over whose representation there could be controversy are the following. They are listed

in alphabetical order of the letters used in the text, not the index, of this book.

Sound in Classical Arabic	*Represented here as:*	*Transliteration Preferred here*	*Alternative*
Long a (alif)	a	ā	
ḍad ("d" with tongue against upper front teeth)	d	ḍ	
gh (limited scrape, more gutteral than Arm. "gh")	gh	g̲h	gh
i (short vowel: represented only by mark beneath line of writing, if at all)	i (missed out if preceding a y: e.g. "Mayafarkin")	i	Sometimes y (e.g. "Mayyafariqīn", not"Maiyafariqīn")
j (hard j)	Normally dj; sometimes j	dj	ǰ, ǧ
kh (scrape in back of throat)	kh	k̲h	kh
qāf (clicked "k" at back of throat)	k	q	ḳ
ṣin ("s" hissed with tongue against upper front teeth)	s	ṣ	
sh (Eng. "*sh*arp")	sh	sh	š
ṭ ("t" equivalent to dad)	t	ṭ	
th (soft "th": Eng. "*th*aw")	th	t̲h	th
dh (hard "th": Eng. "*th*at")	th, d	d̲h	dh
w: (i) genuine "w"	w	w	Sometimes u (e.g. "Daula", not "Dawla")
(ii) long u	u	ū	
y (i) "y" as in Eng. "prayer"	y	y	
(ii) long "i" (e.g. "ee" in "street")	i	ī	
ẓa ("z" equivalent to ḍad)	z	ẓ	
"ᶜayn" (gutteral sound with constricted throat)	—	c	ʿ; ɛ

"hamza" (break in the production of sound)	– (see below)	'

"ᶜAyn" and "hamza" are left out in the text but used for the full transliterations in the index. "Ta' marbūṭa", the "t" of a feminine ending written as an "h" with two dots over it, is put in both the text and the index as "t".

(iii) Armenian

As in Arabic there are sounds which can only be accurately conveyed outside the Armenian alphabet by special symbols. A separate difficulty is that a radical change took place in the pronunciation of Armenian consonants in the areas described in this book: this happened between the period of the first Armenian texts (fifth to seventh centuries A.D.) and the period of the Armenian states and kingdom of Cilicia (started late 11th century). The branch of Armenian embodying these changes is known as Western Armenian.

In this book English spelling is used to represent the Classical pronunciation. No additional symbols are used, though a scholarly transliteration system, which assumes the Classical pronunciation, exists. In the few cases where readers without Armenian might have met a name only in the scholarly transliteration, this has been given an entry in the index. The sounds which cause the difficulty and the different ways of representing them are as follows:

Written Armenian: Classical pronunciation.	*Represented here as:*	*Western pronunciation.*
dz	dz	ts
ts (non-aspirate)	ts (pron. in English as aspirate)	dz
ts (aspirate)	ts (Eng. pron.)	ts
dj	dj	tch
ch (non-aspirate)	tch/ch (pron. in Engl. as aspirate)	dj
ch (aspirate)	tch/ch	tch
kh (full scrape in throat: "loch", but exaggerated)	kh	kh
gh (at back of throat: "a*gh*", not "a*ch*")	gh	gh
aw (pronounced as long "o")	o	o

ow (pronounced "u", as sound of "foot")	u	u
long "e"	e	short "e"

There is a "shar" in Armenian, a letter with an "-er" sound as in "water" ("r" not sounded), only never stressed. In some cases where this is sounded, it is optional to write it. Sometimes it is sounded, but not written, in order to help out with the pronunciation of consonant groups: e.g. "Khtsgonk" is pronounced "Khertsgonk" (accent on second syllable). In this book the transcription does not generally recognise the "-er" sound ("shar"); but if its omission from the transcription would be particularly misleading, then an explanation is given in brackets to help out, e.g. "Khtsgonk" (pron. "Khertsgonk").

(iv) Syriac

This is a Semitic language with a grammatical and phonetic structure similar to that of Arabic. Classical Syriac is not spoken today except as a learned language. Modern Syriac has two main branches, effectively groups of dialects: the Western dialects (mainly in use among the Syrian Orthodox of Turkey, Syria and Lebanon) and the Eastern (most of whose speakers are the Nestorians, now mainly in Iraq). The Western Syriac dialects mostly spoken in Turkey are those of the Tur Abdin, and are known collectively as Turoyo. The Turoyo forms of place-names and names of monuments are those now used on the ground.

However some monuments and places have become well known in "western" scholarly or travel literature under another form. This came about particularly through the efforts of Gertrude Bell, on whose accounts of certain of the churches and monasteries most art-historical literature, where it deals with the churches and monasteries of the Tur Abdin, is currently based. Bell tended to put either an Arabic form or the Classical Syriac form.

In general I put the Turoyo form of a place-name or that of a monument as the identifying form. However where a form is current in "western" scholarly literature but different from Turoyo I put it as the identifying form. The Turoyo form comes after it in brackets. Where the Classical Syriac form is not put as the identifying form (which is the usual case) I have sometimes put it after the Turoyo form. Chief differences in common words:

Turoyo	*Conventional scholarly*	*Meaning*
dayro	deir, der (Arab.)	Monastery
mor	mar (Class. Syr.)	"Lord", "Saint". E.g. "Mar Gabriel" = "Lord Gabriel" or "Saint Gabriel".
beth (e.g. "Beth Svirina")	ba ("Ba Sebrina": Class. Syriac)	Territory (but "Beth Svirina" is village name)

The Turoyo forms are represented by an approximation in the English alphabet. Similar approximations are put in the text for Classical Syriac forms, and exact transliterations of some Classical Syriac forms are put in the index for names which might be known to non-Syriacists only in transliteration. The sounds which could cause difficulty are the following:

Sound in Class. Syr: exact translit. system	*Represented here as*	*Pronunciation*
b	b	Pron. v/w after vowel
d	d	Pron. dh after vowel
g	g	Pron. gh after vowel
ḥ	h	As Arabic h
k	k	Pron. kh after vowel
q	k	As Arabic "q" (qāf)
p	p	Pron. f after vowel
ṣ	s	As Arabic
š	sh	As Arabic "sh"
t	t	Pron. th (soft) after vowel
ṭ	t	Tip of tongue pressed firmly against palate: different from Arabic.

(v) Greek and Latin, Kurdish, Persian, Georgian

Greek and Latin. Latin names are simply given in their Roman spelling even where they Latinise a Greek or other local name. However if the context is a non-Roman one (e.g. "Arabissos", rather than "Arabissus" – modern Afşin – in the tenth century A.D.) the Greek or local form is the more appropriate.

With Greek names I follow modern scholarly practice. English spelling is used to represent the Classical pronunciation, in spite of the sound changes between Classical and medieval Greek. Sounds which may cause difficulty or controversy:

Sound in Cl. Greek	*Sound in med. Gk.*	*Represented here as*	*Standard scholarly representation*
b (beta)	v	b	b
ch (chi)	ch	ch: but *not* a scrape like Armenian "kh": aspirate k.	ch
g (gamma)	gh	Normally g, sometimes gh to conform to usual spelling, e.g. "Aghia".	g

d	th (hard, e.g. "that")	d	d
e		(No distinction between long and short)	Sometimes ē for ēta.
th (aspirate t)	Ditto	th	th
long o	long o	o	o, sometimes ō
u (omicron-upsilon)	u	ou	ou, but just occasionally u, as in "Thucydides"
ph (phi)	ph (phi)	ph: but pronounced as aspirate "p"	ph
u (upsilon)	i	y	y

Kurdish and Persian: similar principles to Armenian.

Georgian: ditto. The ejectives are not distinguished. X (scrape, "kh", with admixture of gutteral k), written "kh".

2. Official new place-names

The government has now devised and put into use new names derived from Turkish words for nearly all villages and towns in connection with which it feels that the name current before the invention of the new one does not have a sufficiently Turkish look or derivation. For example "Haho" (originally Georgian "Khakhuli") has been given the name "Bağlarbaşı", "Vineyards-Head". New names have not been found for absolutely every place, because sometimes the existing name is too firmly rooted: e.g. Bayburt, İspir. But every *village* either has a new name or else already had a name judged Turkish enough.

Locally and in conversation very few of the new names have caught on: just one or two have, e.g. "Bingöl" for "Çapakçur". Consequently for practical purposes one need not find out the new name, and the traditional one, of course, is that found in most scholarly and travel literature. However any official purpose – sending letters, law-court proceedings, etc. – requires the use of the new name. In this book the new names are put in brackets after the traditional ones.

3. Dates

Sometimes the A.D. equivalent of a date in the Islamic calendar has to be given as two consecutive years, e.g. "1171/72". I use a stroke to separate the two dates: this indicates

that a particular year in the Islamic calendar is being considered, and if the source of the information had specified the day or even the month, the A.D. year could be given exactly. "1172–73" means a *period* of two years.

4. Special symbols.

(i) Monuments

(a) In front of the name:

***	Basic to eastern Turkey as a whole.
**	Basic to its region inside eastern Turkey.
*	Worthwhile monument if you are passing by it.
+	No particular recommendation: one might or might not be interested, depending on one's tastes, knowledge, interests, etc.
†	For specialists only and even then not guaranteed to interest them.

(b) In the body of an item dealing with a particular monument:

(A)	Author's opinion: the symbol indicates there are respectable published opinions with which mine radically disagrees.

(c) At the end of an item dealing with a monument: except where the monument is so well-known and so frequently visited that there is no doubt about its condition, the date of the last visit by an accurate authority, published or not, is put in brackets. If the only source is a publication, and the publication gives no date, then the publication's date is put. Where an authority has been at work over a period, but gives no dates for his visits to individual monuments, I put an estimated date towards the end of the period in question. If I have visited the site and my description is based wholly or substantially on my material, an asterisk is put after the date. Thus:

(1979.)	Last known visit was in 1979, and I have been to the site. (The last known visit may have been *after* my own.)
(*1979.*)	Last known visit was in 1979, and I have not been to the site.
(1979*)	Last known visit, probably but not necessarily mine, was in 1979, and the account in the text is based wholly or substantially on my material.

(d) In bibliographies:

archit.	architecture/architectural
disc.	discussion (rather than supplying new information).

(ii) Road types and conditions

***(a)	Good tarmac.
***(b)	Bad tarmac: normally bad surface, but sometimes twisting and narrow.

**(a) Good non-tarmac road. Smooth surface, well-engineered.

**(b) Not so good non-tarmac: easily negotiable by car, but care may be needed.

* Possible by car, but recommended you do not take an ordinary private car on it.

† Only for landrovers.

5. Arrangement of monuments and of other information

Within each chapter concerned with a region, first the best monuments are treated in a group, then the remaining monuments are gone through district by district.

Practical information (distances, times, etc.) is not given more than once except where this presents the information in a manner which enlightens both contexts or saves the reader trouble. In cases where the same information is appropriate at two different points but given at only one, the principle followed is this: the information in question is put at the first such point, because the monument or district being described at the second possible occurence is in some kind of dependent relation. For example, there may be several monuments accessible from a particular road, in which case I describe the road first, giving the details of distances along the road, including the distances at which roads branch off to the monuments in question; then the monuments are described, giving only the distance *from* the road and sometimes *which* road this is. The rule has been broken in just a few cases, for the sake of economy; but in these cases it is not hard to look for the appropriate districts or sections in the remainder of the chapter. The index at the end of the third volume could also be used.

6. Bibliographies

Those at the end of the introductory chapters and the short bibliographies at the end of each regional chapter are aimed at non-specialist readers. The lists are short; the items are in English, accessible (i.e. not in general requiring visits to specialist libraries), well-expressed and of substantial relevance rather than making an oblique contribution. Other items are reserved for the other bibliographies.

For the monuments, these come at the end of each "major" monument and otherwise in a bunch at the end of each district. The lists are not exhaustive, but concentrate on items supplying hard archaeological information, and on those containing good further references. Where two references cover the same ground, I have put them both in, provided that they are equally good. For the historical sections in each regional chapter, the more specialist bibliographies come right at the end. Sources are not in general cited, because the reader can normally get to them from the items quoted. Specialist bibliographies, with some indication of contents and usefulness, for the subjects covered in the introductory chapters are put at the end of Volume III.

I
INTRODUCTION

Turkey is far too big for all its monuments to be described in a single book. One half of the country is larger than both Germanies put together; and the number and variety of civilisations represented either in the whole or in any one half of Turkey is greater than in any nation of western Europe. Books describing the whole country inevitably give precedence to the more familiar buildings of the Greeks, Romans and Byzantines, and since these are less represented in the country's eastern half, it is always, in such books, the eastern half of Turkey which gets treated sparingly and with no great precision or perception. The simple quantity of buildings alone are more than convincing grounds for a book on eastern Turkey, and it may be that this aspect of the case no longer needs to be made out.

The other and more important aspect of the case is the general novelty of the buildings in Eastern Turkey, the history attached to them and, for that matter, the landscape in which they are placed and the different peoples who are now spread over the landscape. As soon as we treat eastern Turkey on its own, we come to take seriously the civilisations which have occupied it and of which the monuments are such explicit symbols; that is to say, we start to understand and notice their precise characteristics and excellences. But to take Turkey as a whole is to allow attention to concentrate (even if we manage to represent all the buildings in the country in an accurate and impartial manner) on the monuments which we already know or which we already have the mental equipment to understand. It is inevitable, too, that the presentation of a book on the whole of Turkey will be guided by the writer's perception of his readers' state of knowledge; but this is not very different from saying that his perceptions of the buildings too are formed by theirs. The only alternative is a separate book on the less familiar half of Turkey. We can then see accurately the qualities of the buildings and landscape. And it is this which prompts us to see how many buildings there are.

If we were dealing with familiar buildings, landscape, history and people an account of the buildings in Eastern Turkey would be a guide-book pure and simple. As it is, there is so far nothing approaching a comprehensive

account of the buildings, or even the materials for a comprehensive account. Much of what is said in this book is new, whether to attempted general accounts of the region's monuments, or to partial accounts, or to both. The book functions as a guide, but it has also to be taken as a statement of what there is.

It is the Middle Ages which is most alive in the monuments of Eastern Turkey. The many medieval monuments are rich in architectural beauties. The region, on the other hand, is now fundamentally rural in character, and to see any one of the medieval monuments is to be faced quickly by the question: what was the source of the wealth on account of which building these monuments became possible?

In the Middle Ages and before the economy was in essence quite different from its present character and for the most part from its character under the Ottomans. Instead of being fundamentally rural, it was fundamentally a mixture of rural and urban. By this is meant, not that half the population was engaged in agriculture and half in industry and trade, but that there existed a sizeable network of cities, and that the cause of the cities' existence was the development of specifically urban means of livelihood, in this case industry inside the region and international trade passing through it. By the time the Ottoman administration was established throughout the region the network of cities had been reduced. The permanent Ottoman conquests began in the west in the late 14th century and ended in the mid-16th century: the major Ottoman gains were made in the twenty years after the battle of Çaldıran in 1514. A century after these gains the government began to lose its grip on this region (as well as on many others), agriculture and industry began further to decline and the volume of international trade was cut to a level of a different order from that in medieval times. It is easy to find exceptions on both sides of the case. But if we are trying to penetrate to the essence of the matter then the fundamental change in the economy's character is the first point. If we can see this point, many aspects of the historic buildings become understandable.

The height of much of the region's terrain appears inhospitable to the support of medieval cities, but the cities were there, and their monuments are there to be seen. In the south-east, there were cities on the edge of L.Van and nearby. In the north-east, on some high plains, were the cities of Kars and Ani. On the north coast were a number of Greek cities. South of the Pontic mountains, by the Upper Euphrates and further west, were several more. Further south, on the Lower Euphrates, were Malatya, Arsamosata and its successor Harput. The Mesopotamian district was highly productive and supported a cluster of cities in the east and a local network in the west, including Urfa (Edessa), its rival Harran, and Samsat. In the present Hatay district (in the south-west) the cities of Seleucia Pieria and Antioch (now Antakya) were founded soon after Alexander's conquests and the

swift division of his empire.

In general the cities were founded in the Hellenistic period (very roughly the mid-fourth to the mid-first centuries B.C.), in the Late Roman period, the early Middle Ages and one or two in the tenth century. Nevertheless, even before the Hellenistic period certain cities had prospered. Under the Urartian kingdom (ninth to seventh centuries B.C.) flourished the city of Van and many towns probably approaching it in size. Carchemish and the city of Alalakh (Tel Açana, near Antakya) existed in the Hittite period, and certain neo-Hittite states were based on cities such as Zincirli, Arslantepe, a predecessor of Malatya, and (again) Carchemish. Although the cities founded before the Hellenistic age did not, for the most part, last into that period, a corpus of cities was founded then, was enlarged under the early Byzantine empire and in the early Middle Ages, and, with changes, survived most of the Middle Ages. The same corpus was under destruction in the period between about the mid-fourteenth century and the last phase of Ottoman conquest.

The truth is that the terrain, even leaving aside the Mesopotamian district in the south, is not so inhospitable to the support of cities as one might think. The eastern tableland, though high, contains plains and rolling land besides mountains and broken territory. Further west the country's basic character is still a succession of plains and mountain ridges or areas, with some high, hilly pastureland. The mountain chains themselves contain much unusable land, but it was their east-west alignment, often invoked as the cause of so many invasions, which made the region suitable for the movement of international trade.

With the region's medieval economy went a political division of the region and a character of government to which the economy was naturally and essentially allied, each supporting the other; and this point further illuminates the basic nature of the economy and thus of the buildings. Eastern Turkey is through its geography inevitably a border region. From the high eastern third the land descends to east and west, invasion east or west being always invited by the direction of the mountain ridges. The Taurus mountains towards the south are naturally the northern frontier of the Mesopotamian district. But in the Middle Ages and to some extent in the periods preceding them, although the region stood between empires and, generally, part of it was occupied by empires, there existed also independent or arm's-length vassal states which the empires' opposing pressures upheld. These were, chiefly, the Armenian kingdom or kingdoms at various times in Armenian history, Georgia, and later the Turkish principalities and the Byzantine empire of Trebizond, for this purpose a relatively small state. The interest of these states lay in maintaining their cities and the sources of wealth which they represented, that is, agriculture, industry and international trade. In consequence, of course, there was significant wealth available for expenditure on buildings. As it happens, even in land belonging to an empire of the

period there are examples of building on a scale and of a type appropriate to a city of the highest rank, particularly the massive Seljuk expenditure (in the thirteenth century) on building in cities such as Malatya and Erzurum. In addition, during the periods when two large empires *were* directly contiguous along a border in or near this region, and the border peoples (particularly the Syrians on the border between the Byzantine and Persian empires) it was their position on or near the border which allowed them to keep an independent mentality and life.

Under the Ottomans however, Syria and Iraq, to the south, were part of the empire; and the border ran along the eastern edge of the region, two empires meeting there. On the far side was the Persian empire, later the Russian. No intervening states of any political influence, and generally no intervening states at all, were tolerated. The region was a series of outer provinces, admittedly with certain large non-Turkish populations, under an imperial administration. The populations, apart from officials, did little building except in the late 19th century. From the early 16th to the early 17th century, however, officials, or minor princes in official positions, both held the resources to carry out building and had the inclination to pay for it. Nevertheless, despite the quantity of new mosques built by the Ottomans, particularly in Diyarbakır and Erzurum, their scale and style is provincial.

This puts them in strong contrast to the mentality of the medieval buildings. Quite apart from the ability of the local economy to finance building, there is a difference in mentality between provincial centres taking their lead and viewpoint from a capital at some distance, and cities and populations with a life and viewpoint and economy of their own in an independent or semi-independent state. The style of the medieval buildings is not provincial, even it sometimes requires to be explained by reference to classic examples elsewhere.

In the Middle Ages much revenue from the region's agriculture and commerce was channelled into the foundation of monasteries and other churches, both inside and outside cities; and in the latter case the building was not exactly urban but nevertheless associated with the existence of cities. Three East Christian monastic traditions flourished, and in the late Middle Ages Orthodox monasteries possessed great wealth in the territory of the "empire" of Trebizond, and were to an extent endowed with it by the emperors.

The many Armenian churches now in eastern Turkey are both within and outside cities, and, irrespective of that division, both monastic and lay. The Georgian monasteries and other churches are perhaps more associated with towns than with cities, which is natural in the terrain where they are sited. Those of the Syrian monasteries in the Tur Abdin (in the eastern Mesopotamian district) are all outside cities, but the buildings now to be seen in some of them must be associated with urban wealth, and in the past

Diyarbakır and Urfa contained many Syrian monasteries, now lost. The monasteries of the empire of Trebizond, particularly the three greatest, were sited for the most part in the mountains, but some are nevertheless in the city itself.

Turning to the Muslim monuments, which are mostly Turkish, as a category the finest of these that survive are the Seljuk medreses of the thirteenth century. A medrese is a type of institution designed essentially for the religious education of political leaders, and naturally belongs inside a city. The best of the mosques, on the other hand, are mostly the product of smaller states to the east of the Seljuk frontier. Much of the early history of Turkish mosque architecture in present-day Turkey is to be found among them. The Ottoman mosques, built by provincial governors in local capitals, were inevitably additions to the stock of architecture inside cities. Belonging to a provincial style, they are nevertheless well-executed; some are finely decorated. There is plenty to be learnt, too, about the style itself.

Eastern Turkey is full of castles: the terrain provides any number of sites, and one is constantly coming across castles of all sizes sited at the top of crags or cliffs, besides city fortifications on more level sites. Castles are more typical of the Middle Ages than of any other period. They are essential to a type of social organisation akin to feudalism which characterises much of the region's political history during the Middle Ages, and, whether or not within a feudal state, castles are integral to medieval warfare. The medieval castles are mostly Turkish, Armenian, Byzantine and Crusader (two of the four Crusader states were in present-day Eastern Turkey). There are, however, some fine Mamluk fortifications in the south. The Urartian kings, too (ninth to seventh centuries B.C.), were expert military builders. Strong walls were essential to cities of the Middle Ages and earlier, and some of the cities' wall enceintes, particularly in the Mesopotamian district, survive.

The main contributuion of archaeological excavation in Eastern Turkey, apart from the "rescue" digging in sites to be flooded by dams, has been in the uncovering of certain cities dating from well before the Hellenistic and Roman periods. The central Anatolian Hittite empires date from roughly 1700 to 1200 B.C., and, mostly in the south-west of the region, there are cities founded during, before and after this period, those founded afterwards being the capitals of small states with a culture showing a certain continuity with that of the Hittite age proper. Post-war excavation has brought to light a number of interesting Urartian citadel-towns.

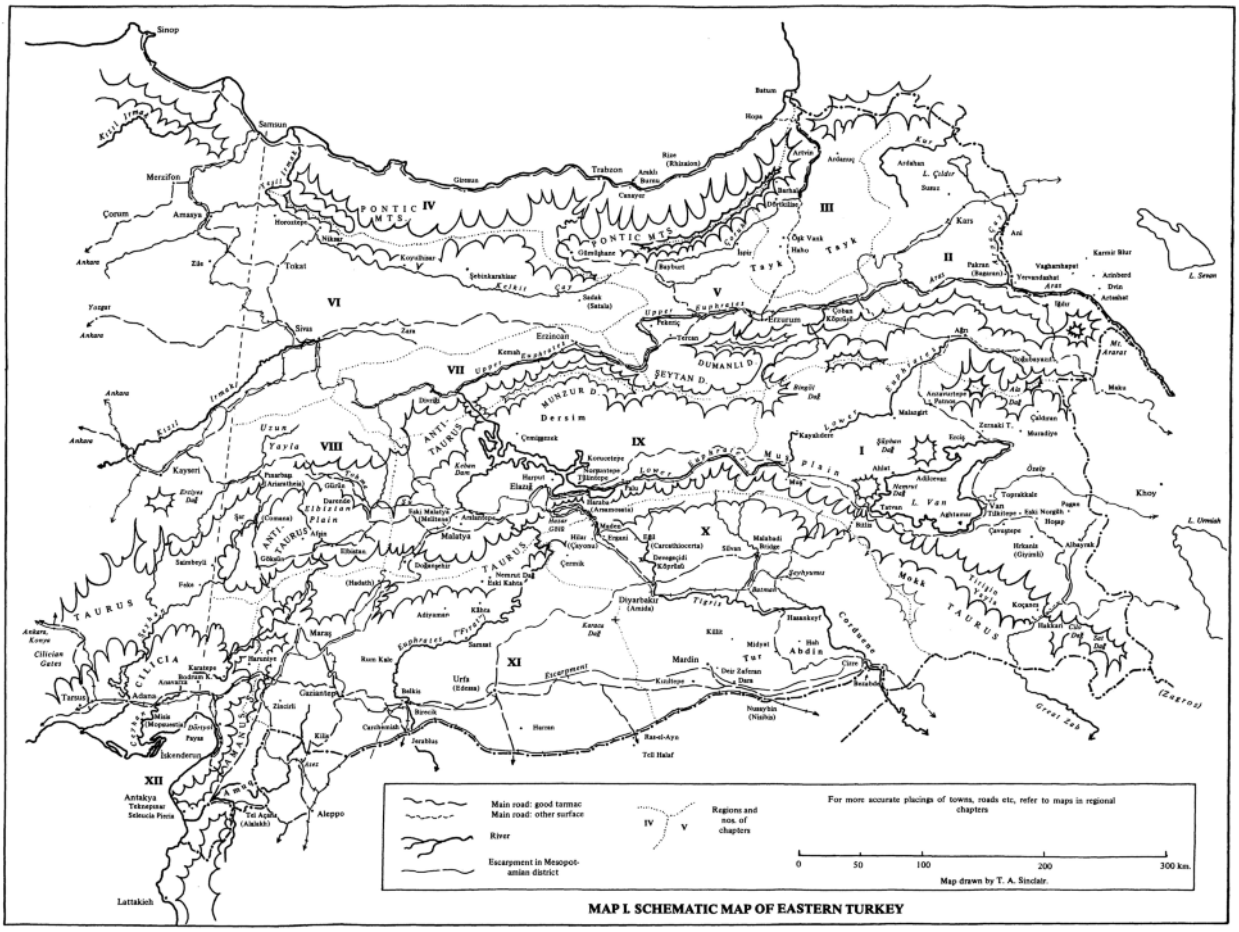
Armenian, Georgian and Syrian churches; Seljuk medreses, early Turkish mosques, medieval Turkish, Armenian, Byzantine and Crusader castles, Late Roman city walls, Urartian citadels, pre- and neo-Hittite cities, are not, whatever their interest and beauty, specially familiar subjects to European readers, and this book takes great care over introducing them. Where the book is describing individual monuments, the aim is literally to acquaint the

reader with the buildings and give him the material to understand them, whether or not he is standing in front of them. In the book's more general parts the object is in fact the same. The architecture is introduced. It is stated briefly what is typical of the main categories and in particular what is good about them. In general terms it is also stated *what there is.*

Some space is given to landscape. The landscape surrounds the buildings, and a first-hand acquaintance with the buildings implies an acquaintance with the landscape. In practice it is difficult to imagine a building without its surroundings, just as it is hard to imagine a person without his milieu. Landscape and geography are, moreover, fundamental to the understanding of a building's local role, and of the local circumstances of its construction. A knowledge of landscape and geography is also fundamental to the narration of history, and a close link with the past. The landscape has, in any case, its own independent interest. Most areas are rich in natural beauty, the most famous being the wooded Pontic mountains and the environs of Van in the south-east.

The only kind of history in this book is building history, but in that is necessarily included general background beside the simple facts of construction. Where it deals with the buildings one at a time, the book tries to state the circumstances of the building's construction and the events which have affected its fabric since then. If a city's history is in question, the main interest is in showing how the corpus of buildings was changed over time by successive rulers. It is clear, however, that these two types of narrative alone would not provide proper answers to questions about the history associated with the buildings. For one thing, one wants to relate the events in one building's history to those in another's, whether or not they are part of the same building programme. For another thing, these events are often the same. Repeating them for each monument is not merely expensive on space and dull, but makes it a hard and irritating process to reconstruct, for any one point in the time, events taking place or states of affairs existing over the whole region. The principle in the book is to put facts common to different buildings' histories in parts of the book specifically devised for general information. The introductory historical chapter expresses the essentials, and is aimed at the general reader with very little background.

The type of historical introduction and background that is needed above all others is an account of historical geography. By this is meant questions of the extent of states, the districts over which certain populations were spread, the scatter of settlements, the alignment of routes and the positions of settlements on them; it is a way of fitting history on to the landscape. It does not exclude critical events in history, and does not lack narrative. But the central narrative element is in watching changes take place over time in political divisions and the distribution of settlements, rather than in a recital of battles, treaties, invasions, rebellions and accessions to thrones. "Histori-



MAP I. SCHEMATIC MAP OF EASTERN TURKEY

cal geography" sounds dry and abstruse, but that results from a particular way of talking which suggests historical geography is the next stage on after doing just ordinary history. In fact it is the aspect of history which one looks for first after knowing of the existence of a building in such-and-such a place and belonging to such-and-such a date and builder.

As for the buildings themselves, the description of them is organised in chapters covering areas. The principle of arrangement according to areas is the effect of the book's emphasis on *what there is*. The attempt has been made to choose geographical divisions which are historically the most enlightening. For each area we have a short introduction which takes one further into the landscape and history. After the buildings have been described there is a section which sweeps up some of the questions of background left by the descriptions. Just as the buildings need a historical introduction, so they raise questions about history. Moreover certain questions about the history of the buildings themselves, either individually or in groups, are difficult to answer without a prior examination of the buildings and of the geography of the districts where they are sited.

Among the buildings we pull to the front of the account the best few in the area. The purpose is, not merely to save the reader time, but to reflect the sort of groupings that buildings of an area assume in his mind. It is irritating, for example, to have an Erzurum or a Diyarbakır fixed half-way along some route, or buried in some other methodical inventory of buildings: we conceive of it as one of the first points of reference in its region. The remaining buildings are grouped according to smaller divisions of the area in question.

In the description of the buildings the priority is to be explicit about their features. We are never content to dismiss a building with a date or a builder or a category: that ignores the important question of *what there is*, on which information is generally so scarce or inaccessible. The interest is partly in the building's present condition and any changes made to it since it was first put up. The reason is, not that changes or damage (if they have affected the monument) are interesting in themselves, but that the building's present condition is the only one with which we can be acquainted. The building in its present condition is *what is there*. Even if we wanted to reconstruct mentally some perfect image of the buildings's newborn state, it is impossible to be acquainted with the building *in* that state. In the descriptions these constructs are a device for interpreting what is seen, and even more use is made of the device in the general chapters on architecture. But such constructs are not an aim of the descriptions themselves. The hypothetical past state can only be the image for which the present condition is the viewpoint.

The next chapter concerns the main architectural types of the region's historical buildings. Understanding the architecture's principles requires a basic geographical and historical vocabulary.

Two critical mountain ranges traverse the region east-west: the Pontic mountains near the Black Sea in the north, and the Taurus in the south. Within these two ranges we can talk of a high tableland to the east, about a third of the region as a whole. The base height descends gradually towards the west until the westernmost sectors of the course of the Euphrates (either its northern branch or the combined stream below the confluence of the northern and southern branches). Thereafter mountain and hill ranges, particularly the Anti-Taurus, are traversed before the wide area is met which is conventionally known as the Anatolian plateau; practically none of the so-called "plateau" lies within the area covered by this book. The Pontic mountains go down more or less straight into the sea, but a long area to the south is defined by the Taurus mountains. This area includes part of Mesopotamia, and, west of the Amanus mountains, part of Cilicia.

To expound the main lines of the region's history, it is convenient to start with the most recent period. Adjacent to the present eastern half of Turkey the Ottoman empire originally occupied a fragment of Persia; to the north-east, parts of the present-day USSR, including land on the eastern shore of the Black Sea; and to the south, Iraq and Syria. The Ottomans lost these, the fragment of Persia in the early 17th century, the now Russian territory in the 18th century, and Syria and Iraq in the First World War.

Before the Ottoman annexation the region had undergone constant wars between several states. The Il-Khan empire, a division of the Mongol empire, had provided some kind of unity in the last third of the 13th and the first third of the 14th century (the Mongol empire established its power over most of the region in 1243); but when its last strong ruler died, a scramble of small states was left. Most of these were former tributaries of the Il-Khans; the empire of Trebizond and the Turkish Artukids at Mardin survived from the political configuration of the region which had obtained before the Mongols arrived. After a period in which the Mongol remnants disappeared or declined, a state of affairs emerged in which the smaller of the states were generally in vasselage to one or other of three powers, the Mamluks of Egypt and Syria to the south, and the two Turcoman confederations, the Ak Koyunlu and Kara Koyunlu ("White Sheep" and "Black Sheep"). The latter two competed with one another to destructive effect, and during their struggles took place the invasions of Timur or Tamurlaine (late 14th century).

The Anatolian Seljuk empire, whose capital was Konya (well to the west of the region) was established soon after the critical battle of Malazgirt (1071). At the same time Turkish leaders were given, or captured for themselves, principalities further east: for example the Danishmendids, whose principal capital was Sivas, the Mengujukids (principally at Kemah, Erzincan and Divriği), the "Shah-Arman" ("Shahs of Armenia") at Ahlat by Lake Van and the Artukids of Mardin and Hasankeyf in the eastern part of the Mesopotamian district. In Cilicia an Armenian state was formed; it was only destroyed in 1375 by the Mamluks. The Crusader county of Edessa

(Urfa, in the western Mesopotamian district) survived only the first half of the eleventh century, but the principality of Antioch (now Antakya) lived into the first twenty years of the Mongol occupation.

Before the Turks made their first incursions into Anatolia in the 1010's the pattern of states was this: two Armenian kingdoms occupied the high eastern part of the region, and there had grown up a small but well-organised Georgian principality. West of these was Byzantine territory, and Byzantine emperors annexed the smaller states one by one, the Georgian state before and the Armenian kingdoms after the beginning of the Turkish invasions.

The small Christian states had been formed only through the weakness of the Abbasid empire, successor of the Umayyad. These were the Arab states which in the seventh to ninth centuries had a border with the Byzantine empire, roughly speaking in the Taurus and by the Upper Euphrates: the Abbasid dynasty has to be distinguished from the Hamdanid emirs who, ruling on behalf of the Abbasids part of north Syria and much of Mesopotamia in the middle of the tenth century, maintained the same border. The Armenians and Georgians lived as subject peoples without kings before the Arab hold began to weaken.

Under the early Byzantine emperors (the Roman empire was divided in the early fourth century) there was a border with the Persian empire through a divided Armenia and in Mesopotamia. It was on both sides of the Persian border in Mesopotamia that the Syrians (later divided into Syrian Orthodox and Nestorian) were established, and it is in this region, which includes the Tur Abdin (near Diyarbakır), that the Syrian monastic movements began and gathered strength.

In the second century A.D. the Roman frontier in the region was further back: just including the Pontic mountains, it turned south to run down the Upper Euphrates, then down the combined Euphrates into Syria. The remnant of the Seleucid empire had been annexed in the first century B.C.. This empire was in origin the portion of Alexander the Great's empire falling to Seleucus, one of Alexander's generals. The Romans had also taken the kingdoms of the Pontus and Commagene. It was in the first century B.C. that Armenia suddenly became an empire, which was defeated and just as suddenly forced to abandon its conquests.

During the middle part of the Seleucid empire's duration, there existed two Armenian kingdoms, of which the smaller lay around the Lower Euphrates near its junction with the upper branch and in part of the upper Tigris basin. Before this Armenia had been part of the Achaemenid empire. The Armenians themselves were originally migrants who settled, in part, in the former Urartian kingdom, the nucleus of which was the land surrounding L.Van. It is likely the Armenians subsumed the Urartian population: the Urartian was the larger element in the racial fusion, but the Armenian language was eventually accepted everywhere inside the former Urartian kingdoms's boundaries.

The Hittite empire, whose capital was Boğazköy, a little west of the region covered by this book, was destroyed around 1200 B.C. Certain states contemporary with it existed in north Syria, including the present Hatay district, before being absorbed. After the empire broke up, smaller states, such as that centred on Carchemish, were formed or reformed. These were destroyed by Assyria in the 9th to 8th centuries B.C.

There is plenty of evidence from excavations and surface remains for settled occupation earlier than the period of the Hittite kingdom in eastern Turkey, but the terms used to identify the cultures are the names of periods and places rather than of peoples, and there is no need to create a historical vocabulary in order to understand their architecture or the archaeological work which has helped to reveal them.

II
THE BUILDINGS

A. CITIES, CASTLES, ROADS AND BRIDGES

1. Definitions

The ancient, medieval and Ottoman cities of eastern Turkey were themselves architectural entities, besides being the context of individual buildings. For the purposes of describing ancient, medieval and Ottoman cities, but not modern ones, we can define a city as a settlement of a certain size (considerably smaller than that of present-day cities) which lives on or for something more than agriculture or pastoralism. A settlement is a village if it is simply supported by agriculture or pastoralism; if it lives off exchange in agricultural goods, for example by holding markets, and simply services, as it were, agricultural production, then it is a town.

The cities in question partly fulfilled the functions of towns and of villages. Many of their inhabitants, for example, would have been engaged in agriculture near the city. However a city is distinguished by its engaging in long-distance trade or industry; or else it may simply be a capital or other centre of administration, in which case apart from agriculture it may make no contribution to wealth. We also expect greater material comfort and architecture of greater distinction than in towns or villages. As regards the remaining attribute of cities, size, the cities' populations were not large. 25,000 or 30,000 was perhaps typical. However the population of Late Roman Antioch is said to have been about 200,000. The ancient, medieval and Ottoman cities were different from modern European ones in respect not only of size but also of the extent to which the populations were engaged in the distinctive urban activities.

Normally but not always the cities were walled, and their fortifications had many features (towers, ditches, double walls etc.) in common with those of *castles,* and many medieval cities were defended by a citadel, in other words by a castle ("citadel" is defined more closely below), in addition to

the walls. Castles are enclosures, of varying size, with military purposes: many, however, had other uses, such as administration or civilian habitation. Larger castles with an obviously permanent function such as administration or a large garrison can be referred to as *fortresses*. Yet not all fortresses were a case of an especially large castle, and this was particularly true of Roman legionary fortresses. The latter were in fact too big: the military unit or units for which they were built were larger than a castle could be conceived of as containing. Moreover the function of a legionary fortress required an open and level site: that of a castle did not, and castles were more naturally sited on hills or rocks or other eminences.

Of the two normal elements, citadels and city walls, of the defences of a medieval city in this region, the *citadel* was simply a castle built for the defence of a town or city, and generally attached to the defensive wall. There are signs that medieval writers found difficulty in making an explicit distinction between a city's citadel and its *walled area*, and when a citadel proper was lacking they sometimes used the word for "citadel" to denote the walled area. This was because the *suburbs*, which are defined for present purposes as everything outside the walls, were sometimes as large an area as that inside the walls, and seemed to stand in the same relationship to the walled area as the latter would in turn to the citadel. There are no cases of walled suburbs in the cities, former or present, of eastern Turkey, as there were in Iran. However in one case (Erzurum in the 10th and 11th centuries A.D.) the suburb was so important as to be a separate settlement, in effect a second city.

2. Cities and other settlements

The first known cities in the region are those of the Hittite and so-called "Neo-Hittite" periods (the latter in the 12th to 8th centuries B.C.) in the south-west. To date at least only one city in the true sense has been discovered in this region from the Hittite period, that of Alalakh, whose site is now known as Tel Açana, near Antakya. There had been towns from at least as early as the third millennium B.C., and towns (such as Harran) co-existed with these first cities.

At Alalakh were excavated a palace, rebuilt once, against the inside of the city wall and a short section of the city wall, which was double and included a gate. At Carchemish, on the Euphrates just inside the border with Syria, the "town centre" but not the citadel was excavated: next to a triangular central space were a temple with its enclosure and a staircase to the citadel; a street led to a gate in the wall, part of which was cleared. The citadel lay next to the Euphrates, and the city wall described a large semi-circle round it. At Zincirli on the plain near İslahiye (between Maraş and Antakya) the excavations of the late 19th century uncovered the whole of the towered and double city wall, a perfect circle round the acropolis in

the centre; and on this acropolis two extensive palaces and a surrounding wall were found. Nothing but a few stones can now now be seen, however.

At Karatepe on the River Ceyhan east of the Cilician plain the outer face of the walls was cleared: this turned out to be a roughly circular shape with many towers. However not much inside the city was cleared, and the visitor is only made aware of the two entrance complexes, interestingly enough lined with relief slabs. At Maraş the medieval citadel on the hill above the town no doubt follows the Neo-Hittite city wall, but nothing dating from before the Middle Ages has been even looked for.

In short, something about the shape of the city wall in general (the most economical shape was chosen), a little about the relation of the citadel to the city walls, and much about the size of the walled areas (moderate except for that of Carchemish) has been learnt. What has not been learnt at all is the nature of the *internal* layout of the walled area.

In the Urartian sites (9th to 7th century B.C.), whether city, town or free-standing castle, the ubiquitous and generally most impressive feature is the technique of fortification. The mud-brick defensive walls stood on a splendidly firm and well-jointed masonry base; towers, which in the general case seem to have risen the equivalent of one storey above the wall, are constructed on bases which project slightly in front. Of the sites in eastern Turkey one at least, Van, was a genuine city. Here part of the city wall's course was followed in the excavations. It lay more or less horizontally on a slope shaped like a long trapezium whose upper edges were formed by a cliff cutting them off. The slope led down to a plain at its foot. The cliff and wall effectively determine the shape and extent of the walled area. A citadel stands just at the edge of the cliff. However it is not clear where the suburb or suburbs were, nor how the houses within the wall were arranged.

Of the other Urartian sites which are not free-standing castles or individual houses, there are two types. One is a kind of citadel-town (in a sense to be defined below), the other a town with a citadel in a quite ordinary sense. The citadel-town, though not so common as the town in the more ordinary sense, was favoured by the kings in roughly the second half of the kingdom's life. It required large expenditure on building work by the king as opposed to the inhabitants, and since properly-conducted excavations on Urartian sites started (in the Soviet Union, between the wars) has come to appear a type of building complex distinctly germane to Urartian craftmanship.

The complex was a citadel-like enclosure on some raised position, often a hill. Much of the interior was taken up by long storerooms. Palaces, no doubt designed essentially for residence by, and for the administrative duties of, the king's deputy, have been uncovered, and were apparently a normal feature. Of the Urartian palaces uncovered so far inside the citadel-towns all but one are centred on an extensive pillared hall. Small temples with

square interiors and buttresses on the exterior appear in each citadel-town. The population seems to have been strictly accessory to the purposes of the citadel-town. Apart from those residing in the palace, the population lived either inside the enclosure, in which case the accommodation was probably built on top of the storerooms, or else in an appended enclosure. Part of such an enclosure has been excavated in the citadel-town of Karmir-Blur in Soviet Armenia ("Red Hill"; "Teishebaini" in Urartian). Here the houses stood in rectangular blocks defined by streets: common alleys ran between each pair of rows, and there were common storerooms for each block.

In Turkey one Urartian citadel-town can be more or less judged in its entirety: Çavuştepe near Van. This lies within defensive walls on a long citadel-like hill site. The rooms, mostly storerooms, are reached from a street starting about the middle of the walled area, just below the highest point, and progressing to the far end from the entrance. The temple is positioned to one side of the beginning stretches of the street. The palace proper is designed around two corridors, one of which is really the ending stages of the street.

In the case of the ordinary towns, a citadel normally stands to one side on high ground. The town stands beneath, generally but not always on a plain, sometimes unfortified. The citadels' walls seem to have been single circuits, and in general little architecture of any sophistication stood inside them. However the partially-excavated citadels at Kayalıdere and Kefkalesi (the latter just north of Adilcevaz) did contain exactly that, a temple and storerooms in both cases and a palace besides in the second. These two sites should be regarded as somewhere between the "citadel-town" and the town in the usual sense.

About the internal layout of the towns very little has been learnt. At one site in Turkey (Eski Norgüh, south-east of Van) the disposition of the houses over a large area is clear on the ground's surface. The houses seem in general to have two rooms, at least on the ground floor, and a courtyard. Other, isolated, houses have been found, which confirm this layout. The arrangement of the whole mass of houses is informal: there is no regular or pre-planned layout (which is not the same as lacking any shape at all).

New foundations of the Hellenistic and Roman periods were laid out on a "gridiron" pattern as a matter of course, though the walls of Hellenistic cities described irregular shapes for the purpose of overlooking the steepest ground. Four particularly important cities were founded in this region by Seleucus Nicator (late 4th and early 3rd centuries B.C.), founder also of the Seleucid empire. These are Nisibis (now Nusaybin), Edessa (Urfa), Antioch (Antakya) and Seleucia Pieria on the Mediterranean coast near Antioch. Seleucia Pieria and Antioch had long circuit walls enclosing hills above them, and certainly conform to type in this respect. Edessa's walls apparently did not at first enclose the hill later brought within them. However we have little idea, because no digging has been done, of the

internal plan of these four cities. One of them, Antioch, has been excavated to an extent, and part of the colonnaded main street uncovered. This, however, was built in the late first century B.C. during the Roman occupation.

In other foundations of the Hellenistic era we can be fairly sure Hellenistic culture was imitated by the founders, though they were not Greeks themselves. These cities were Ariaratheia (Pınarbaşı, on the Kayseri–Malatya road) and Samosata (Samsat, on the Euphrates not far south of the main Taurus range). They give us, however, in their present state little hard information about any aspect of layout. Nevertheless Samsat's shape can be drawn out in the mind's eye from the fragments of (probably Byzantine) wall still standing: it repeats that of Carchemish, a half-circle round a citadel on the bank of a river. The present excavations at Samsat offer little hope of answering questions about internal layout in this or any other period.

New Roman cities were in general planned on a grid with square units, and lacked citadels. Şar (Roman "Comana") north of Göksün and east of Kayseri was granted city status in the first century A.D. after the Roman annexation of Cappadocia. The excavator of the temple and mausoleum at Şar, who also surveyed the site as it stands, detected signs of a grid layout. In fact enough from the Classical period, including the theatre and part of the wall, remains to give the feel of the whole city. Malatya (Roman "Melitene") was set up as a Roman legionary fortress, probably (judging by the straight west and north sides of the present walls) on a rectangular layout, and was granted city status in the early second century A.D.; however the buildings on the city site (Eski Malatya), including many medieval Muslim monuments, do not betray the Roman layout.

Besides the building of cities more or less from new, settlements were rebuilt completely or in part in areas under Roman tutelage or occupation. For various reasons (mentioned in Chapter III) rebuilding existing settlements was easily the most significant contribution made by the Romans to the stock of urban structures in this region; with thorough excavation this would become clear. As it is, Roman *re*building in this region is hard to appreciate. However in one city rebuilding of the Roman period can be understood from the standing remains. At Hierapolis Castabala beneath and arranged around what became the medieval Armenian castle of Bodrum Kale not far from the River Ceyhan in eastern Cilicia, can be seen parts of the colonnade of the main street (there was no axial street at right angles to it), traces of a subsidiary but parallel street, the theatre, a bath, and two Late Antique churches. The line of most of the city wall is known from sketches made in the late 19th century. Rather less survives at Epiphaneia on the east coastal plain of the Gulf of İskenderun.

It is more than likely that all the Armenian cities founded during the Classical period took after contemporary Greek and Roman foundations. In fact the most prominent group were sited just outside the north-east

boundary of modern Turkey, on the north bank of the Aras (Classical "Araxes") and the east bank of the Arpa Çay. Of these Artashat (Latin "Artaxata": early 2nd century B.C.) has been partly excavated, and a grid system was discovered, exactly as would be expected. Inside what is now Turkey, Arsamosata on the Lower Euphrates was founded probably in the mid-third century B.C. Only the site of its residential area is known, but this site, before it was flooded by the Keban Dam lake, suggested a rectangular shape: excavations were carried out on the citadel, which was not, however, flooded. The city of Tigranocerta (early first century B.C.) was founded as a capital. Where Tigranocerta was has been a vexed question, but in the author's opinion there is not much room for doubt, since a large and impressive site in the upper Tigris basin fits all the clues as to the city's whereabouts which are furnished by ancient texts. The interior of the now nameless site has long been deserted and is at present ploughed up, but it is clear that the city's designers had the model of a rectangle in mind from the three straight sides (marked out by a huge ditch) whose alignment was not dictated by the adjacent river and from the three gates, one in the middle of each straight side; and the implicit rectangle makes it almost certain that the internal layout was a grid pattern.

The deserted city on Zernaki Tepe above Erçis by the north shore of Lake Van was, I believe, the Armenian city of Zarishat, which was founded in the first century A.D. The city's overall shape is amoebic, but as in Hellenistic foundations or re-foundations the object is to secure the most easily defensible line. The intersecting streets forming square blocks are exactly typical of Roman planning, however, and it is this, with the hill site, unusual for an Urartian town, which convinces me that the city is Zarishat rather than the nameless (and purposeless) Urartian city for which Zernaki Tepe is normally taken. The city was never completed or inhabited, which is why the layout is – quite unusually – so well-preserved.

The last Armenian site of the Classical period is Eğil on the Ergani Maden Su, a branch of the Tigris, north of Diyarbakır. This was the Armenian fortress-town of Carcathiocerta, for a time at least the capital of the kingdom of Sophene. Impressive and important as the site is (the citadel stands above tall vertical cliffs rising from the river's edge) I believe it should not be called a city, since the site as a whole was not big enough to accommodate one.

The Late Antique imperial Byzantine foundations were built generally according to a concept of some particular shape (either a rectangle or a rough circle), but mostly without citadels. Although they were set up partly for purposes of defence against the Persian enemy they relied for this purpose not on citadels but on their walls, which were sometimes double, and on the large numbers of soldiers either within or in the vicinity. We have little idea of the cities' internal planning except that Amida (now Diyarbakır) as rebuilt in the late fourth century A.D., Martyropolis (Silvan) and

Theodosiopolis (Erzurum) very likely had two intersecting axial streets starting from the different gates: Amida, however, was roughly circular, whereas the other two were rectangles.

Despite the paucity of information about these cities' internal layouts, the shells of some are left, and invite the imagination to see them *as* cities of the Late Antique period. In particular the impressive circuit of defensive walls at Diyarbakır preserves, through medieval restorations, the Late Roman layout; and at Dara the line of the walls can be followed, some parts of the walls still stand, several large underground cisterns with masonry vaults and piers and some other buildings remain and the site, lying nearly empty in open country, can be seen as a whole from high points within it.

It is generally accepted that medieval Muslim cities, because they were never autonomous entities, were not pre-planned or designed as a whole, but were close-packed collections of houses in a labyrinth of narrow streets. The exceptions were the large new early state foundations such as Baghdad and Samarra (8th and 9th centuries A.D.). As usual we have very little information about the look of the cities in present-day eastern Turkey during the early Arab occupation, but there are reasons for scepticism about the application of general statements concerning Muslim cities to those of the region at that time. However the caliphs founded or refounded several cities, from whose remains something can be learnt.

Harran was perhaps to some extent laid out anew when it became, for a short time in the mid 8th century, the Umayyad capital. Here the walls as they now stand are an oval. The other cities were founded mostly for military reasons by both Umayyads and Abbasids. The layout of Zibatra, near the present town of Doğanşehir not far south-west of Malatya, is clearest. This is a simple rectangle with gates in some of the sides. As usual nothing is known about the interior, but a sensible guess would suggest an orderly layout. The walled area of Djazira (Cizre) perhaps started off as a simple rectangle by the Tigris, to which a long loop of walls was later added. The site of Hadath, north-east of Maraş, is an extensive ruin-field, but little investigation has been done and little notion of shape extracted from the site. As for Haruniye in Cilicia, the city site has not been found, despite the claims of one archaeologist, who, however, does not actually name a specific site.

Other cities grew in Armenia in the early Arab occupation: not much can be said about their built structure except that they had citadels at one edge of the residential area. We know part at least of the course of the city wall at Ahlat. It enclosed a depression between the citadel on its rock and the side of the valley, and probably but not certainly the adjoining plateau. The striking tomb-towers of the Mongol period give a fine sense of the past existence of the city, but it is still not clear whether these were built within the walls or in the suburbs.

In the Bagratid period (8th to 11th centuries) several cities grew up on the trade routes. Here, as it happens, citadels are the absolute rule. In the north-east two cities give a sense of their overall shape. In the case of the Armenian city of Ani this is because the high walls on one side and the canyons on the remaining two sides delimit the city clearly and because several well-preserved churches stand around the site. In the case of Ardanuç the wall followed the edge of the precipices forming the site, in a manner typical of other Georgian towns. Both places are highly impressive, Ani because of its extensive deserted site in lonely rolling country, and Ardanuç because of its exposed position above precipices and the extraordinary cliffs of the citadel above.

After the Turkish occupation no new cities except one grew or were deliberately planted. However it is convenient to deal with several of the cities in the context of the second half of the Middle Ages, because this was when these cities received the form recognisable today. At Mardin the street pattern is preserved, in addition to numerous medieval mosques and medreses, and the long overall shape of the town is more or less kept. At Hasankeyf the shape of the upper town as a whole can be seen (it is simply dictated by the site). Many of the dwellings there were carved out of the rock or used rock-carved rooms. The narrow, often-turning streets and small, close-packed groups of houses are just what could be expected on such a site. Little impression can be got of the overall shape and street pattern of Sivas or Erzincan in the Middle Ages. However we know there was a small rectangular citadel in the middle of Sivas, and at Erzincan, one can at least see the central rectangular walled area.

From Trabzon (Trebizond) one can still get a certain idea of the look of the medieval city; that city spread to either side of the long rock, defined by ravines, which was the full extent of the walled area. Most of the churches that we see now were built in the extensive suburbs.

The Ottomans did not found any new towns in this region, but developed certain of the existing ones. At Diyarbakır a number of medreses and mosques had already been built by the time of the Ottoman conquest (in this case 1515), but the number of mosques added by the Ottomans was extraordinary; this city, with its hans (caravansarays), hamams (baths) and large courtyard houses, is the Ottomans' biggest urban legacy to the area. The same mix and number of buildings was added to Erzurum; here, however, the Ottoman mosques tend to be smaller, and the Ottoman houses are wooden and without courtyards. The town of Urfa seems to contain a large number of Ottoman mosques, many of them not surveyed or published; one whole quarter preserves its narrow streets and large, courtyard houses; and it is not hard to imagine the complete town when it was still contained within the walls. The town of Elazig was planned on a grid system, based on a long main street, in the late 19th century; but this was a new site for an

old town (that of Harput), not a new foundation.

In sum, a certain amount can be learnt about the cities' forms in the various periods: the overall shape of the Neo-Hittite cities, the contents of Urartian citadel-towns, the constant presence of citadels at the edge of Urartian towns (in the ordinary sense), the rectangular shapes of many Classical and some early Muslim examples, the general absence of citadels from the Late Antique ones. The internal street pattern has normally to be inferred. In one or two cases for each period a sense of the cities' forms and patterns is immediately given to those visiting them, but in the rest imagination and information are needed.

To what extent are whole cities preserved as they were in any one period of the past? In Diyarbakır, if one ignores the modern town built against the west and north sides of the wall, a collection of monuments including the city wall has been built up over several periods and can to a fair extent still be seen. Mardin would be a better example, if it were not that the wall had been lost. Here what is preserved is medieval: virtually no public buildings were added in the Ottoman period. To an extent, form and monuments are preserved in Urfa. Monuments, and to a much lesser extent form, are preserved in the centre of Erzurum, the other great Ottoman base in the area besides Diyarbakır.

To what extent are the cities preserved as social rather than architectural entities? If one applies modern notions of size to the former cities, most of them are not cities but towns: but Trabzon, Erzurum and Diyarbakır conform to present-day canons of size. Elazığ and Gaziantep are cities in the modern sense, but not survivals of former cities; Erzincan is a borderline case, since it is at any rate a large town, but on a different site. Others (Urfa and Mardin) of the old cities have retained their former size but not their functions. Van is in the same case, except that it has been built up to the same size as before the First World War on a different site. If we ask, have any old cities remained as *both* architectural *and* social entities, the answer is that one or two have: Diyarbakır as a city of modern proportions, and Urfa and Mardin, which retain the size of medieval cities.

3. Castles

The great significance of the castles in eastern Turkey taken as a whole is their extraordinary number. Some are spectacular and formidable, some are small and humble.

The earliest castles, in a pure sense, to survive above ground in this region are the Urartian ones. These are constructed in the same impressive way (bases of large, well-jointed blocks, and mud brick) as the citadels and town walls. We have an extraordinary example in the enclosure at Anzavurtepe near Patnos (north of Lake Van). The hill with the temple on

its narrow top is overlaid with a web of fortifications; but this is nothing compared to the great loop of walls on the plain below, which the surveyor surmised was a gathering-point for troops.

A border on the Euphrates was maintained by the Romans in the first and second centuries A.D., and they fortified it by means of three large legionary fortresses (Samosata, Melitene and Satala – now Sadak in the hills north of Erzincan), and by smaller forts in between for their cavalry and auxiliary forces. The fort at Satala was rebuilt in the sixth century A.D., and much of the wall, even as rebuilt, has been lost, but it is possible to see the general principle of the layout, which was followed by the Byzantine fort: a large rectangle with a ditch outside. At Malatya the fort was quickly swallowed up in the town, and at Samsat it is hard to know how the legionaries were housed. As for the other forts, they mostly exist, in now rather inaccessible places, as low banks showing the former course of the walls.

In the Late Roman period fortification was taken much more seriously, since the attacks (from Sasanians rather than Parthians) launched on the border were more dangerous. A type of fort quite different in concept to the legionary camps and the earlier forts began to be built: a castle in a high and sometimes inaccessible position which was designed to be held against an enemy trying to advance through the surrounding country. The districts either side of the River Tigris have considerable numbers of these forts, which were meant for defence in depth. Two forts of this period built on the pattern of Roman legionary fortresses, except in stone, are known in the Pontic area. One (Murathanoğulları) stands on flat land, but the other (Canayer, near Arakli Burnu) takes up a wide protuberance between ravines.

The number of castles known from the Late Roman period in Armenia is remarkably small considering that this was the classic period of a type of social organisation which would normally be expected both to require and to be sustained by the presence of a large number of castles. The form of society in question resembles European feudalism in some respects; for the present purpose the important difference is the large number of princes immediately obedient to the king (or, after the abolition of the monarchy, on the top rung of society). No doubt some of the castles have never been found. Perhaps several have been destroyed because they were simply not lived in subsequently. Others were probably converted into the residences of petty emirs and beys, mostly Kurdish, in the late Middle Ages. Compared to the Armenian there are a surprising number of Georgian castles in a small district of north-east Turkey. However many of these were maintained to the end of the Middle Ages and in some cases into the Ottoman period.

During the period of warfare in the region between Umayyads and Abbasids on the one hand and Byzantines on the other, the Arab forces were based on cities such as Malatya and Erzurum, but on the Byzantine

side urban life had in large part broken down, and government was organised from castles. Several of the chief castles were in what is now eastern Turkey. The style of masonry (small, rough blocks and quantities of mortar) and the preference for high sites continued into the period of the Trapezuntine empire (1204–1461). Whereas only a few castles of the former period can now be identified on the ground, the Pontus is thick with castles of all shapes and sizes.

After the Turkish invasion castle-building was pursued just as energetically as before. Much of the military building in the Crusader principality of Antioch and the county of Edessa has been lost, and there is unlikely to have been extensive building in the latter, but two impressive examples survive near Antakya. There are in eastern Turkey several large castles built by the Cilician kingdom of Armenia. Among the Turkish rulers the Seljuks seem to have been most active in this region; the masonry of their castles is not only more careful and more accomplished, using larger stones, than medieval Byzantine castles, but the building projects are consistently large.

Mamluk castles are similarly large and impressive. There are several in the south-west of the region, all on previously fortified sites, but rebuilt in a strong and refined masonry, partly to improve or replace the castles' defences but partly also to improve their look.

The Ottomans did not use forts extensively in this region until the 19th century, but what they did build before the 19th century (for example at Payas, Ahlat and Hoşap) is functional and large-scale. The forts at Payas and Ahlat do not stand on high and inaccessible sites, but on easy ground. The towers are built wide so as to accommodate cannon, and the walls are always high, partly so as to screen those inside from enemy shot. In the 19th century low, star-shaped artillery forts were built mainly near Kars and Erzurum in the north-east against the Russian threat.

In the Ottoman *period* castles were still in use by the Kurdish beys; the mountains south of Lake Van and, further west, the environs of the Tigris are scattered with their castles, small and large.

4. Roads and Bridges

The Romans built paved roads in the district of the Anti-Taurus (these were aimed at Malatya), in the main Pontic range and in the district between (Sivas, Niksar, Sadak etc.). There were also paved roads south of the Taurus mountains on both sides of the Euphrates and in Cilicia, and even one or two in the Taurus just west of the Euphrates. As usual the roads were built through high and difficult as well as easy terrain; most of the routes have been followed by archaeologists, but equally some of the roads are hard to get at even now. The Roman roads, or at least some of them,

continued in use until the seventh century, some probably until the eleventh century. However very few pieces of paving, at least open to view, survive, and the most impressive remnants are rock cuttings. For the most part, where the roads can be seen they exist as levelled or graded grass.

It is known that there were roads in the Late Roman period elsewhere in eastern Turkey, and still other roads are known from the Middle Ages and Ottoman period. But (apart from one or two roads, probably of Ottoman date but built by Greeks, in the Pontus) there is no indication that any of these were paved, and it is likely that none of them were. Since many were needed and in use until roads for motor vehicles began to be constructed in the Republican period, such roads in effect survived, though their physical substance naturally changed with time; by walking the ground and careful observation it is possible to trace, as some investigators have, these roads.

The only well-preserved bridge in the region which for sure is wholly Roman is the magnificent bridge over the Kahta Çay near Nemrut Dağ, and even this, unless it is reconstructed elsewhere, will be lost when the Ataturk Dam south of Birecik is built (supposedly by 1996). Some long and many-arched bridges may have Roman components, for example the Kırkgöz Köprüsü ("Forty-Eyed Bridge") north-west of Malatya. Abutments survive here and there, which are a help in deciding the past course of a Roman road. In tributary valleys of the Euphrates there are impressive aqueducts which served the Roman legionary base at Samosata.

The first bridge now surviving and known to have been put up by a Muslim ruler in this region is that over the Tigris just below Diyarbakır (10th century): the builder was a "Marwanid" then ruling from the nearby city of Mayafarkin, now Silvan. The two Artukid dynasties which ruled in the same area are responsible for two fine bridges (the Malabadi and that by Hasankeyf) designed with a wide central pointed arch (however that at Hasankeyf had a moveable wooden central portion). A few others take after this type, some in the same district. Others again, such as the so-called "Çoban Köprüsü" (lit. "Shepherd Bridge") near Ağrı in the north-east have more or less flat roadways and a succession of arches of more or less the same size: these apparently date mostly from later in the Middle Ages, but the Devegeçidi Köprüsü (lit. "Camel-Ford Bridge") north of Diyarbakır is Artukid (early 13th century).

In this region the Ottomans built nothing on the same scale. They constructed mostly unpretentious bridges where and of the design that they needed and no more. That at Hoşap (south-east of Van) is ornate, though the builder was a local Kurdish "bey". There are some small and pretty single-arched bridges in the Pontus, which again, though Ottoman in date, are for the most part not strictly the work of Ottomans.

B. CHRISTIAN ARCHITECTURE

1. Architectural Terms

Little is compulsory about church architecture; but churches of practically every denomination contain an altar, and it is convenient to use the word *sanctuary* for that room or element which houses the altar. Often the sanctuary in the churches met with in this book is an *apse*; I wish to use the word apse to denote a space, either a sanctuary or not, defined by a wall of semi-circular ground-plan – if not a semi-circle then a curve either shorter or longer than a semi-circle. Sometimes the word *exedra* (pl. *exedrae*) will be used as an alternative to apse.

It is normal in the churches of the region for chambers to stand either side of the sanctuary. These joined the repertoire of church architecture for liturgical reasons, but it does not follow that every instance of a side-chamber was put to a liturgical use. I keep to the term *side-chamber* or *side-room* rather than "pastophorion".

There is no widely-accepted general term for the element of the church designed for the congregation. However in most churches whose ground-plan is based on a rectangle running east-west, one can say that at least one part of this element will be the *nave*. If all we have in a church is a rectangular hall with a sanctuary at the east end, then this could be called a *single-nave* church: an alternative would be a *hall-church*, provided that there is no dome or other substantial opening in the roof.

If, on the other hand, we have a *basilica*, then the nave is the central of three rectangular spaces set side by side. Those to north and south are the *aisles*. The nave is separated from either aisle by a row of pillars or piers. *Pillar* is used to mean a monolith of round cross-section. *Pier* means something bulkier, normally built of the same type of blocks as those used in the construction of a wall; the cross-section of a pier is unimportant to the definition. The word *column* is generally reserved for particularly slender or tall pillars, in the latter case sometimes built of several cylindrical blocks. In the rows of pillars or piers separating a basilica's nave from one of its aisles, the pillars are sometimes joined by *arcades*: an arcade is simply a line of arches, and each arch in an arcade will join a pair of pillars. In general the roof of a basilica's nave is higher than those of the aisles, and the intervening wall contains "clerestory" windows (see Figs. 1 and 2).

Rectangular spaces, whether or not naves or aisles, are generally covered by *vaults* in the church architecture of the region. A vault can be defined as follows: what an arch is to a pier or pillar, a vault is to a wall. It prolongs

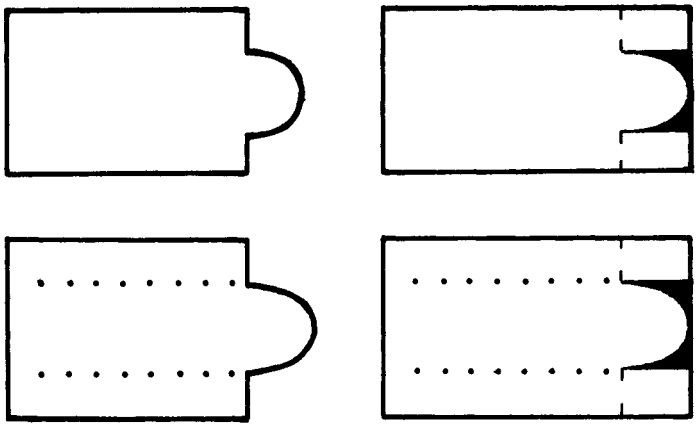


Fig. 1. Single-nave church (upper row) and basilica (lower row)

an arch horizontally, as it were, and encounters the same difficulties of construction as an arch. A *barrel-vault* is simply a vault with rounded cross-section, either semi-circular or a littlé higher in relation to the width of the base (see Fig. 3). A *pointed* vault is simply the equivalent of a pointed arch.

Many of the churches in the region are designed with a *dome*, and the dome is often the central and most critical feature of the design. A dome is simply a half-globe or a globe approaching one: strictly the word refers to the interior hemispherical surface, as the outer surface may be of a different shape. In general the immediate support to the dome is a *drum*, whose windows provide much of the light in the church's interior. The drum can be either cylindrical or polygonal.

Of the churches possessing drums and domes, many are *centralised*, that is to say they do not have a single horizontal axis and a dominant direction along that axis (as for example in a circular church) or any horizontal axis is counteracted by another. In centralised churches the ultimate support of the drum and dome will often be four pillars (or piers) or else four walls. In the former case, the weight of the drum and dome, pressing from the base of the drum, is taken to the pillars by *pendentives*. A pendentive is a section of a globe defined by curving lines on three sides, normally the base of the drum, and an arch to either side (see Fig. 4).

The standard system for bringing a drum or dome down on to a four-walled square is the use of *squinches*. A squinch is simply an arch thrown across a corner between two walls. One in each corner of a four-walled space will provide an extra four points of support for the base of a dome, or else if (as usual) the drum rather than the dome is in contact with the tops of the four walls, the base of an eight-sided drum can be set directly on the squinch. Strictly a squinch is an arch (Fig. 5), but often the space

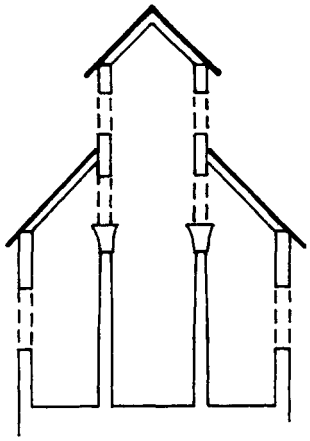


Fig. 2. Cross section through basilica, north-south

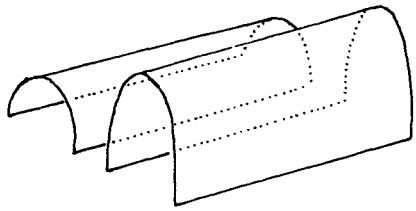


Fig. 3. Barrel-vaults

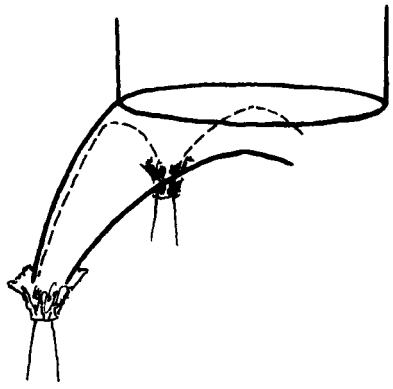


Fig. 4. Pendentives and base of drum

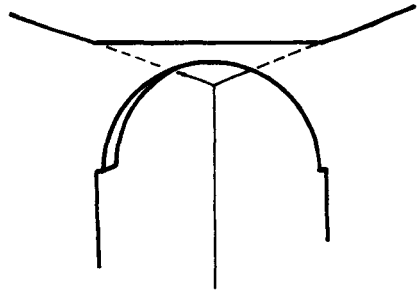


Fig. 5. Squinch

behind the arch is filled up with masonry, so that a curved wall appears behind and below the squinch. There are in fact many variations of the use of squinches and pendentives, but they can be introduced as they are encountered.

2. Byzantine buildings – standard examples

To provide a fixed point from which to judge Armenian, Georgian and Syrian architecture as well as the Greek architecture of the Pontus, one can start by mentioning some of the types of church being constructed in the fourth to sixth centuries A.D. and the early Middle Ages at Constantinople. We can consider, first, the common use of basilicas, and, second, the well-known example of Hagia Sophia. In the latter (if we extract the absolutely critical principles of the design) a dome is set on a low drum, which is then brought down by means of vast pendentives to massive and tall piers. The church is not "centralised" in the sense expressed above: east and west of the drum are two semi-domes, which lengthen the whole design, and on the other hand ambulatories (corridor-like spaces) run east-west like aisles to the north and south of each pair of piers. The design is further complicated by exedrae formed of pillars connecting each main pier to one end of the main apse, and by first-floor galleries.

In the ninth century and later the churches, many of which belonged to monasteries, were much smaller, and tended to be variations of a simpler design. In this, four pillars bearing a drum and dome on pendentives are set inside four walls, often a square. The corner-spaces outside the four pillars are roofed by further domes or by vaults, and those in the remaining spaces (covering the axes) are vaulted too. (The design of four pillars defining nine spaces including a central dome is misleadingly known as a "cross-in-square".) The sanctuary, generally via a *chancel*, and side-chambers, lead off the east side of the square, and a chamber called a *narthex* is set against the west. A narthex (which was also present at Hagia Sophia) is an entrance- and waiting-hall; the term tends to be used with the understanding that the narthex is set against one whole wall of the nave. The pillared square with drum above has great potential for a well-balanced and -proportioned interior, and provides a good number of surfaces for frescoes at interesting angles to one another.

3. Pontic architecture

A great quantity of churches are to be seen in the Pontic coast and hinterland of eastern Turkey. A good proportion of these belonged to monasteries. But for the most part we can now only see monastery churches as opposed

to whole monastery complexes. Paradoxically the three grandest sights in the Trapezuntine Pontus are the three great monasteries of Sumela, Vazelon and Peristereota; and this is so not because of the monasteries' church architecture but because of their extraordinary positions in cliff-faces or at the top of a tall rock, and because one can be aware of them as whole monasteries rather than as individual churches.

If we look now at the architecture of individual churches, it can be seen straightaway that Aya Sofya (the name is a Turkification of Hagia Sophia) at Trabzon, a 13th-century monastery church with remarkable frescoes, picks up the so-called "cross-in-square" design of the Constantinopolitan churches. There are two differences: one, that three porches (not narthexes) are added on the north, south and west, the latter covering the west wall of the narthex, and the other, that Aya Sofya at Trabzon is built in stone, whereas the Constantinopolitan churches are in brick.

It is not clear how common this design was in the Trapezuntine empire, because many of the medieval Pontic churches were replaced in the mid- and late 19th century. The design is certainly rare among the surviving medieval churches of the Pontus. Much more common was the simple basilica ending in a chancel, with apsed sanctuary and apsed side-chamber continuing the widths respectively of the nave and aisles. A variant on this, and not so common, was the "domed basilica", where a dome and drum are set above the vault of the nave. They required pendentives at the level of the vault, sprung generally on four of the basilica's piers.

However even these designs were not the commonest. In the period of the Trapezuntine empire a great deal of church building was done in the hinterland, and much of this took the form of a single-naved chapel with apsed sanctuary and no side-chambers. The vault is strengthened by means of a rib, an arch generally resting on pilasters set against the wall, but sometimes sprung on brackets fixed into the wall just beneath the base of the vault. This *rib* then makes a convenient and standard division between, and sometimes an additional surface for, the paintings which progress round the church's exterior.

During the last century of the Greek presence in the district governed by the former empire of Trebizond, particularly in the last half of the 19th century, a number of medieval churches were knocked down and supposedly grander ones built in their place. Other churches were built *de novo*. Among the new churches, reconstructed or otherwise, the most common single design is a large church of basilican layout but with a "barn" roof – a single pitched roof with no clerestory. The next most common design is the "cross-in-square". These tend to be built taller and to place less emphasis on the central dome than in the medieval equivalents. The nave tends to be comparatively long, and the whole interior is manoeuvred towards a basilican layout. The smaller churches were single-nave chapels.

4. Armenian and Georgian architecture

Armenian and Georgian church architecture belongs to a radically different genre from the Pontic churches, even if some architectural elements and features are sometimes in common. As between themselves they have far more in common; yet they are distinguishable from one another both as total œuvres and with regard to specific stylistic features and architectural elements. It is better to see Armenian and Georgian architecture as two peaks of the same mountain rather than as two different genres or one and the same architecture. Both in eastern Turkey and in general Armenian is the dominant half: far more churches exist, they exist in a wider area, and there are more classics to the credit of Armenian architecture. On the other hand Georgian churches tend to be larger than Armenian; moreover if Armenian church architecture is responsible for a greater number of classics, a fair critic might well conclude that one or two Georgian churches are the best in the whole group.

The classic period of building starts in the sixth century. It lasts, in the territory of present-day Turkey, till the 11th century, with a few exceptions in the revival of the 13th century, particularly the first third of that century. In what are now Soviet Georgia and Armenia it continued until the 13th and early 14th centuries. Apart from the use of stone, which can be more or less taken for granted in eastern Turkey, the feature which above all needs to be understood in the classic period is the apse (distinguished from its sense as a sanctuary) used as an architectural element elsewhere than the sanctuary. A second feature is the straining after interior height. Within the boundaries of modern Turkey, though not if we extend the field to Soviet Georgia and Armenia, this is more conspicuous in Armenian churches, but present to a greater degree in Georgian: the difference is explicable by other features of design. A third feature is the exterior stone decoration: blind arcades, generally with slim engaged pillars, on the facades and round the drum, and a limited use of abstract decorative carving on the exterior walls, particularly on "hoods" over doors and windows (Fig. 6).

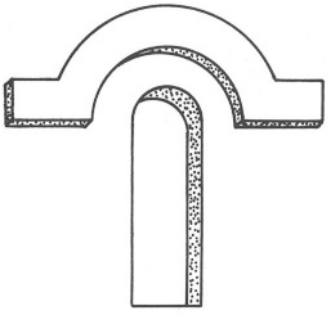


Fig. 6. "Hood" over window

In many of the Armenian, but only one or two of the Georgian, monasteries, all of which in any case are abandoned, the whole or part of the monastery complex survives, and the church can be seen as part of it. Some of these complexes were surrounded by defensive walls with towers, and in one or two cases the whole wall survives.

(i) Before the Turkish invasions

Among the Armenian churches now in eastern Turkey and put up in the classic period distinguished above, there are nevertheless two main periods of construction: the sixth to seventh centuries and the late ninth to early eleventh centuries. The most celebrated are those of the second period, while if the comparison is made strictly between these two periods, the opposite is true in Soviet Armenia. But if both areas are taken together, two main sorts of design with radically different emphases can be seen. One is the "centralised" design (in the sense given above) where several apses, normally four, lead off the square space under the dome and support the dome's downward and sideways push by means of the semi-domes covering them (see Fig. 7). Provided the apses are tall, this makes possible a roomy and unoppressive interior and at the same time buttresses the drum and dome more solidly than pillars.

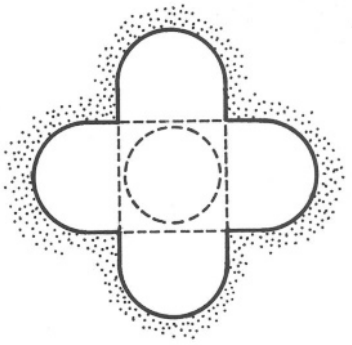


Fig. 7. Principle of "centralised" Armenian design

Within this basic design one should separate three different principles again. The first is that of including small rooms of some shape or other which lead off the corners between the apses, and larger rooms either side of the *west* apse as well as either side of the *east* apse. In the well-known church of St. Hripsime at Echmiadzin in Soviet Armenia, the whole design is cut out of a rectangle, with the result that from outside the church appears thick and squat. In the equally well-known 10th-century church of Aghtamar the four apses are clearly revealed on the exterior because the side-rooms for the west and east apses have been narrowed, allowing the four apses to appear as rectangular arms radiating off the space beneath the dome. The solution applied to the small rooms leading off the corners is to express them as slim turrets in the corners between the arms. As a whole, Aghtamar *appears* a taller church than St. Hripsime, but this is an illusion brought about by the exterior treatment. All the same, even in the case of Aghtamar it is the interior which sets the pace in the design and makes the most satisfying sense.

The second principle of design is that of the circular ambulatory round the basic lobed design that has been distinguished above; in general the ground floor of the apses is converted into an arcade for free movement into the ambulatory. The corners between the apses were filled either by pier-like masonry masses or with chambers on several storeys, which made

a full circle to be lined by the ambulatory. The alternation of apses and chambers (or else massive piers) was, like the ambulatory, given a circular pitched roof (see Fig. 8). The great exemplar of this design is Zvartnots in Soviet Armenia (seventh-century – now destroyed). But Zvartnots was exactly copied at the church of Gagik at Ani (early 11th century) and the churches of İşhan and Penek (Georgian "Bana") were both constructed to the same design. The former of these was originally built in the seventh century at the same time as Zvartnots, but converted later by Georgians to a different form. The second, in its present form, is Georgian, but may have had an Armenian predecessor.

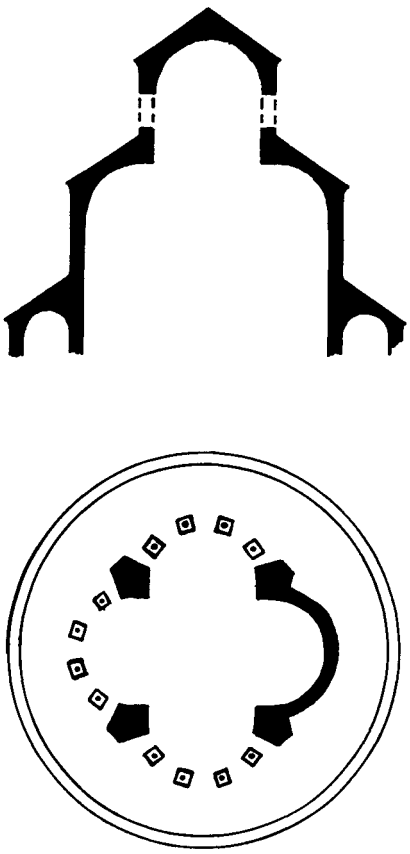


Fig. 8. Principle of Zvartnots type

Thirdly there are the "many-lobed" patterns. Here six or more lobes, apses of greater or lesser size according to the total number, are arranged around and supporting the dome. These are then expressed on the exterior by a polygon, by two straight faces guarding each lobe, or by a curving face for each lobe. Not many churches of this type are left in Turkey, but the chapel of St. Gregory Abughamrents at Ani (early 11th century) shows the possibilities of this design for a rather petite exterior.

The second basic type of design is rectangles with a longitudinal character but crowned by domes. If the width of the church is considerably greater than that of the dome, the dome is held up, in the middle of the rectangle, on pendentives and thick piers, and two arches are flung from each pier to the other walls (see Fig. 9). The effect on plan is that of a "cross-in-square", but the architect ensures, by keeping the vaults both high off the ground and long from east to west that any notion of a balance between an airy drum and dome interior on the one hand and a lower, spreading base on the other, is forgotten. Nor is the design a "domed basilica". Not merely are the two long rectangular strips

north and south of the dome (Fig. 9, 1 & 2) nearly the same height as the central one, but we are invited to see the piers as four great central trunks rather than the supports for a pair of arcades. In Turkey the classic example is the cathedral of Ani (late 10th to early 11th century), where the sense of height is skilfully accentuated on the exterior by the blind arcades.

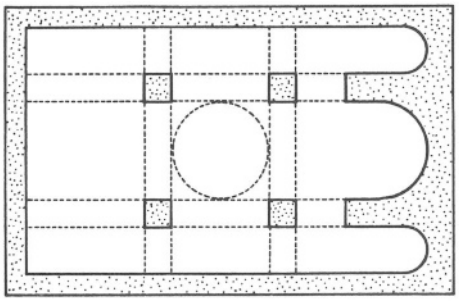


Fig. 9. Principle of cathedral at Ani

Where the dome is not much narrower than the church as a whole, it is taken on the ends of the two walls separating the sanctuary and side-chambers and on two others coming inwards from the north and south outer walls (see Fig. 10). Short vaults (a and b in Fig. 10) at the height of the drum's base steady the drum and dome from the side. The design (best called a "domed rectangle" in English; "kuppelhalle" in German) became popular in monasteries in the 10th century, and is very common in those to the south of Lake Van. The best-executed example is the monastery church of Tigran Honents in Ani (early 13th century) which, however, was given an abnormal height owing to the influence of Georgian architectural practice.

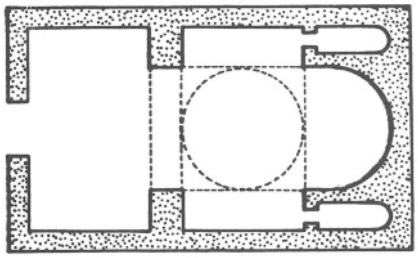


Fig. 10. "Domed rectangle"

Georgian architecture in present-day Turkey is part of the constellation of designs created by the different principles just mentioned, but treads an individual path among them nevertheless. None of the churches built originally by Georgians and now surviving is "centralised", but the designs are mostly based on the principle of three arms, normally apsed, placed round a drum and dome, with the place of a fourth arm taken by a nave. (If these arms are simple apses on the interior, the design is known as a *triconch*.) The nave, however, is, in some of the later examples, either basilican or basilican to an extent. The contribution of the side-aisles to the interior is completely suppressed (for example by means of low arcades and bulky pillars in the highly ingenious design – 10th-century – of Haho), or the aisle is done away with (as in the south aisle of Öşk Vank – also 10th-century) or walled off (the north aisle at the same church). There are in fact two

basilicas of standard ground-plan (Barhal and Dörtkilise) among these churches, which, needless to say, receive the full Georgian treatment (exterior stone carved decoration and so on) which unmistakeably separates them from Byzantine basilicas.

In a mechanical sense these Georgian churches are a cross between the Echmiadzin type of "centralised" layout and the "domed rectangle" of Tigran Honents. But it would be better to see the plan as one arrived at by an imaginative synthesis of certain basic elements in the repertoire of the Georgian and Armenian genre. And in general it makes no sense within the genre of classic Armenian and Georgian architecture to talk of movements over time which could be represented as mechanical manoeuvring of the designs. There are no "developments" in design within the genre except, no doubt, in the very beginning (fourth to sixth centuries), where most of the examples are lost. It is much more instructive to think of the genre as a family: different designs of any one period are related, variations and different syntheses occur, but these are implicit in the basic fund of elements, and on the other hand it is not surprising if a design is repeated after four hundred years, either through an identical synthesis or through straight imitation.

(ii) After the Turkish invasions

In Armenian Cilicia the castles contain small single-nave chapels and one or two basilican churches, and it looks as though Byzantine models were adopted. In Ani and its district there was a building revival in the 13th century: the district was controlled by the Georgian kingdom. Church designs of the classic period were employed. There is an unusual emphasis on large chambers known as *zhamatuns*. A zhamatun was a chapter-house which could function as an outer church. In the Ani district these were built mostly in already-existing monasteries. Various vaulting systems were employed. Some features of these vaulting systems were adopted from Muslim architecture; Syria seems the most likely provenance. The commonest vaulting principle is that of four pillars in a rectangle supporting nine ceilings or vaults.

In the Turkish-governed territories building did not stop completely, nor were designs of the classic period entirely abandoned. In Vaspurakan (south and east of Lake Van) sometime in the 13th or 14th centuries the church of the monastery of St. Bartholomew at what is now Albayrak was given a small "domed rectangle" church; attached to the west end of the church was a large zhamatun. In the valleys south of Lake Van monasticism was still strong in the 14th to 16th centuries, and there was a building revival in the mid-17th century. The churches built in these periods tended to be long single naves. The monasteries also began to acquire zhamatuns of a particularly extensive type. The most common design is